

In the Specification:

Please amend the specification as follows:

Please replace the paragraph beginning at page 1, line 8, with the following replacement paragraph:

--The present application is a divisional application of and claims priority from U.S. Patent Application No. 09/887,543 for LIGHT STIMULATING AND COLLECTING METHODS AND APPARATUS FOR STORAGE-PHOSPHOR IMAGE PLATES filed June 21, 2001 (Attorney Docket No. SAY1P004), which claims priority from U.S. Provisional Application No. 60/257,622 for LIGHT STIMULATING AND COLLECTING METHOD FOR STORAGE-PHOSPHOR IMAGE PLATES filed December 20, 2000 (Attorney Docket No. SAY1P004P), the entire disclosures of both of which are incorporated herein by reference for all purposes.--

Please replace the paragraph beginning at page 24, line 10, with the following replacement paragraph:

-- Traditionally, phosphor plates are manufactured on a flexible substrate (PET, MYLAR~~ylar~~) like prompt phosphor screens. These plates are either mounted on a hard backing (e.g., an aluminum plate) or are kept flexible in order to be transported and read in the laser scanning apparatus. Therefore, according to a specific embodiment of the present invention, in order to maintain sufficient contact between the surface of such a flexible phosphor plate and the light collection apparatus, e.g., a fiber-optic face plate, the phosphor plate is mounted on a thin foam layer which is compressed when the light collection apparatus is pressed against the surface

of the plate. According to a more specific embodiment, where the light collection apparatus is held at each side, the foam can be made thicker at the center of the plate than at the edge to ensure sufficient contact across the entire width of the plate (e.g., see Fig. 9).--

Please replace the paragraph beginning at page 25, line 20, with the following replacement paragraph:

-- According to other specific embodiments of the invention, the collection fiber-optic faceplate may also serve another important purpose. That is, it can be configured to block partially or completely the stimulating light. In order to provide such blocking, the fiber-optic faceplate may be constructed from materials which absorb the stimulating light and transmit the stimulated light. Such materials may include optical filter materials such as ionically colored glass e.g. SCHOTT BG3. However, the difficulties associated with drawing such materials into fibers and bundling them into fiber-optic faceplates (e.g., such glasses have a low refractive index and are not stable through various heat treatments) may not make them the best materials for such an implementation.--

Please replace the paragraph beginning at page 42, line 15, with the following replacement paragraph:

According to other embodiments, the chemical composition of the dye is changed to quench its natural fluorescence. Quenching the fluorescence of laser dyes in the red region of the spectrum has not previously been achieved. Other techniques have been used to circumvent this problem. For example, European patent application EP 1 065 525 A2 describes a method for filtering out the fluorescence of the laser dye by combining it with a conventional colored glass

filter (e.g. 1mm ~~TEFLON~~ SCHOTT BG39). The conventional colored glass filter does block the fluorescence of the laser dye but introduces an unacceptable additional thickness in the optical path. It is desirable to eliminate the fluorescence without introducing an additional filter layer.

Please replace the paragraph beginning at page 26, line 13, with the following replacement paragraph:

As is well known, the transmission of a fiber-optic faceplate is a function of the numeral aperture of each fiber. The numerical aperture of each fiber increases as the difference in refractive indexes between the core and cladding increases. Fiber optic faceplates are traditionally manufactured from glass since high index and low index materials are easily available. This has not been the case for plastic materials, i.e., most of them tend to have a refractive index close to 1.4. A new plastic material is now commercially available from the Florida-based company Optical Polymer Research Inc. Until recently, most fiber-optic faceplates have been manufactured from glass since materials having a sufficient index differential are easily available. Recently, a new class of plastic material has been developed. This new material, marketed under the name Opti-Clad, has a very low refractive index (less than 1.36) and as such is suitable for use as a cladding material around, for example, a styrene core (refractive index close to 1.59). ~~TEFLON~~ TEFLON is also another good cladding material since its refractive index is 1.3. As a result of this advance in materials science, it is now possible to manufacture plastic fiber-optic faceplates with high numerical apertures. According to a specific embodiment of the present invention, an energy-absorbing dye is introduced into the plastic employed to make such a fiber-optic faceplate to obtain a faceplate with a high numerical aperture and good rejection of stimulating light.

Please replace the paragraph beginning at page 28, line 10, with the following replacement paragraph:

According to a more specific embodiment, the linear array is placed in a cavity and a liquid transparent epoxy is poured over it. Once the epoxy has cured, it creates a hard transparent layer which is thin over the photosensitive area and thick over the bonding area of the linear array. The bond wires can be directly encapsulated by the epoxy or can be first coated with a resilient material (e.g., silicone) before they are covered with the epoxy so as to alleviate issues related to mismatch in coefficients of thermal expansion. In order to guarantee that the surface of the epoxy in contact with the plate will be perfectly flat, it is proposed to create a mold in which the proxy will be poured. For example, the mold can be as simple as a perfectly flat TEFLON~~eflon~~-coated surface placed in front of the linear array which will hold the epoxy while it is poured and which will be removed after the epoxy has cured. According to one embodiment, a one-part epoxy such as 4021T manufactured by Ablestick is employed. This epoxy will adhere to glass and silicon but will not stick to the TEFLON~~eflon~~-coated surface. The transparent epoxy can also contain the absorbing dye necessary to block out the stimulating light (as it is described further on in this document).

Please replace the paragraph beginning at page 29, line 17, with the following replacement paragraph:

Regardless of which material is used over the linear array (e.g., fiber optic faceplate, glass, plastic or epoxy layer), this material should not scratch the image plate. Removing dust and dirt from the contact area will reduce chances of scratches. In a specific embodiment, an additional layer of TEFLON~~eflon~~-like material is coated on the plate or the material itself to

reduce friction between the two surfaces. In another specific embodiment, the outer edges of the surface in contact with the image plate are beveled or rounded to reduce the chances of scratches.